Final Exam — Practice Test

Newfoundland and Labrador Chemistry 2202 • 50 questions

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **The molar mass of methane, CH_4 in grams per mole, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **Think about the definition. A covalent bond forms by**

A. transfer of electrons only

B. sharing electrons between atoms

C. attraction between ions only

D. breaking all bonds

Understand It with Pulse | Flag a mistake

3 **An alkene with one double bond and 5 carbon atoms has how many hydrogen atoms?**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **The mass, in grams, of 5 mol of a substance with molar mass 32 g per mole is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **Apply the definition carefully. The shape of methane, CH_4, is**

A linear

B bent

C square planar

D tetrahedral

Understand It with Pulse | Flag a mistake

6 **Apply the definition carefully. The functional group OH is found in**

A an alkane

B an alkene

C a carboxylic acid

D an alcohol

Understand It with Pulse | Flag a mistake

7 **In the reaction $2H_2 + O_2 \rightarrow 2H_2O$ the moles of oxygen needed to react with 6 mol of hydrogen is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **Review the key idea. Water is a polar molecule mainly because**

A it is linear

B it is bent and oxygen attracts electrons more strongly

C it has no lone pairs

D hydrogen is more electronegative than oxygen

Understand It with Pulse | Flag a mistake

9 **Check the definition first. Isomers have the same molecular formula but**

A different numbers of atoms

B different elements

C different structures

D different molar masses

Understand It with Pulse | Flag a mistake

10 **At standard temperature and pressure, the volume, in litres, of 2 mol of an ideal gas, using 22.4 L per mole, is**

ANSWER

Understand It with Pulse | Flag a mistake

11 **Remember how the term is defined. Metallic bonding is best described as**

A positive ions in a sea of delocalised electrons

B sharing one pair of electrons

C transfer of protons

D hydrogen bonding between metals

Understand It with Pulse | Flag a mistake

12 **Remember how the term is defined. Benzene is an example of**

A an aromatic hydrocarbon

B an alkane

C an alcohol

D a carboxylic acid

Understand It with Pulse | Flag a mistake

13 **Think about the rule. An empirical formula gives**

A the exact number of atoms in a molecule

B the molar mass

C the simplest whole number ratio of atoms

D the percent composition only

Understand It with Pulse | Flag a mistake

14 **Think about the rule. Compared with a single bond, a triple bond between the same atoms is generally**

A weaker and longer

B weaker and shorter

C stronger and shorter

D stronger and longer

Understand It with Pulse | Flag a mistake

15 **Recall the rule. An alkene reacts with bromine water by**

A forming a salt only

B producing no change

C burning completely

D decolourising it in an addition reaction

Understand It with Pulse | Flag a mistake

16 **A solution contains 2 mol of solute in 4 L. Its concentration, in moles per litre, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **A carbon atom has how many valence electrons?**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **Consider the rule in general. A polymer is made by joining many**

A atoms of one element only

B monomers

C ions in a lattice

D solvent molecules

Understand It with Pulse | Flag a mistake

19 **The molar mass of oxygen gas, O_2 in grams per mole, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 **Think about the concept. A covalent bond forms by**

A transfer of electrons only

B attraction between ions only

C breaking all bonds

D sharing electrons between atoms

Understand It with Pulse | Flag a mistake

21 **Recall the concept. The name of CH_4 is**

A methane

B ethane

C propane

D butane

Understand It with Pulse | Flag a mistake

22 **The mass, in grams, of 2 mol of a substance with molar mass 44 g per mole is**

ANSWER _____

Understand It with Pulse | Flag a mistake

23 **Apply the concept. The shape of methane, CH_4, is**

- A linear
- B tetrahedral
- C bent
- D square planar

Understand It with Pulse | Flag a mistake

24 **Consider the concept in general. The functional group COOH is found in**

- A an alcohol
- B an alkane
- C a carboxylic acid
- D an ester

Understand It with Pulse | Flag a mistake

25 **Think about the principle. The percent by mass of hydrogen in water, H_2O , to one decimal place, is**

ANSWER

Understand It with Pulse | Flag a mistake

26 **Think about the principle. The strongest intermolecular force in liquid water is**

A hydrogen bonding

B London dispersion only

C dipole dipole only

D ionic bonding

Understand It with Pulse | Flag a mistake

27 **Recall the principle. An alkene is unsaturated because it contains**

A only single bonds

B a double bond

C no carbon atoms

D only hydrogen atoms

Understand It with Pulse | Flag a mistake

28 **At standard temperature and pressure, the volume, in litres, of 1 mol of an ideal gas, using 22.4 L per mole, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

29 **Apply the principle. Metallic bonding is best described as**

A sharing one pair of electrons

B transfer of protons

C positive ions in a sea of delocalised electrons

D hydrogen bonding between metals

Understand It with Pulse | Flag a mistake

30 **Consider the principle in general. The molar mass of ethanol, C_2H_6O , in grams per mole, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

31 **Review the principle. An empirical formula gives**

- **A** the simplest whole number ratio of atoms
- **B** the exact number of atoms in a molecule
- **C** the molar mass
- **D** the percent composition only

Understand It with Pulse | Flag a mistake

32 **Review the principle. Compared with a single bond, a triple bond between the same atoms is generally**

- **A** stronger and shorter
- **B** weaker and longer
- **C** weaker and shorter
- **D** stronger and longer

Understand It with Pulse | Flag a mistake

33 **Recall the idea. Isomers have the same molecular formula but**

A different numbers of atoms

B different structures

C different elements

D different molar masses

Understand It with Pulse | Flag a mistake

34 **For a 1 to 1 reaction, if 7 mol of A reacts with 2 mol of B, the maximum moles of product formed is**

ANSWER _____

Understand It with Pulse | Flag a mistake

35 **Apply the idea. Ionic compounds in the molten state generally**

A never conduct electricity

B are gases at room temperature

C conduct electricity

D are soft and low melting

Understand It with Pulse | Flag a mistake

36 **Consider the idea in general. Benzene is an example of**

A an alkane

B an alcohol

C a carboxylic acid

D an aromatic hydrocarbon

Understand It with Pulse | Flag a mistake

37 **Review the idea. In the balanced equation H_2 plus Cl_2 forms HCl, the coefficient of HCl is**

A 2

B 1

C 3

D 4

Understand It with Pulse | Flag a mistake

38 **Review the idea. Across a period from left to right, electronegativity generally**

A increases

B decreases

C stays the same

D becomes zero

Understand It with Pulse | Flag a mistake

39 **Recall the property. An alkene reacts with bromine water by**

- **A** forming a salt only
- **B** producing no change
- **C** decolourising it in an addition reaction
- **D** burning completely

Understand It with Pulse | Flag a mistake

40 **In $2H_2 + O_2 \rightarrow 2H_2O$ the mass, in grams, of water formed from 4 mol of oxygen is**

ANSWER _____

Understand It with Pulse | Flag a mistake

41 **Recall the property. The shape of ammonia, NH_3, is**

- A tetrahedral
- B bent
- C trigonal pyramidal
- D linear

Understand It with Pulse | Flag a mistake

42 **Consider the property in general. A polymer is made by joining many**

- A monomers
- B atoms of one element only
- C ions in a lattice
- D solvent molecules

Understand It with Pulse | Flag a mistake

43 **Review the property. The molar mass of water, H_2O in grams per mole, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

44 **Review the property. An ionic bond forms by**

A sharing electrons equally

B transfer of electrons between atoms

C sharing electrons unequally only

D pooling electrons in a metal only

Understand It with Pulse | Flag a mistake

45 **Recall the statement. The name of CH_4 is**

- A ethane
- B propane
- C butane
- D methane

Understand It with Pulse | Flag a mistake

46 **The amount, in moles, in 64 g of a substance with molar mass 32 g per mole is**

ANSWER _____

Understand It with Pulse | Flag a mistake

47 **Recall the statement. The shape of a water molecule is**

A linear

B tetrahedral

C trigonal planar

D bent

Understand It with Pulse | Flag a mistake

48 **Consider the statement in general. The functional group COOH is found in**

A an alcohol

B a carboxylic acid

C an alkane

D an ester

Understand It with Pulse | Flag a mistake

49 **Consider the principle in general. In the balanced equation H_2 plus Cl_2 forms HCl, the coefficient of HCl is**

- A 1
- B 3
- C 4
- D 2

Understand It with Pulse | Flag a mistake

50 **Consider the statement in general. The shape of carbon dioxide, CO_2, is**

- A bent
- B linear
- C tetrahedral
- D trigonal pyramidal

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	16	**18.**	B	**35.**	C
2.	B	**19.**	32	**36.**	D
3.	10	**20.**	D	**37.**	A
4.	160	**21.**	A	**38.**	A
5.	D	**22.**	88	**39.**	C
6.	D	**23.**	B	**40.**	144
7.	3	**24.**	C	**41.**	C
8.	B	**25.**	11.1	**42.**	A
9.	C	**26.**	A	**43.**	18
10.	44.8	**27.**	B	**44.**	B
11.	A	**28.**	22.4	**45.**	D
12.	A	**29.**	C	**46.**	2
13.	C	**30.**	46	**47.**	D
14.	C	**31.**	A	**48.**	B
15.	D	**32.**	A	**49.**	D
16.	0.50	**33.**	B	**50.**	B
17.	4	**34.**	2		

© 2026 Brett Robbins. All Rights Reserved.